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Emerging Technology Tool in Education: Mobile Learning

A Google search of the phrase ‘emerging technology trends in education’ will bring up a multitude of articles and reports projecting varying opinions, but one reoccurring projection is the use of mobile and handheld technologies in the classroom. This emerging trend is becoming known as M-Learning, or “mobile learning.” The term M-Learning “covers: learning with portable technologies including but not limited to handheld computers, MP3 players, notebooks, and mobile phones” (Wikipedia, 2009).

Mobile devices, specifically cell phones and smart phones, have extended their reach dramatically over the past five years, specifically since the introduction of the iPhone in 2007. Learning in the 21st Century: Taking it Mobile, a report conducted by Blackboard and Project Tomorrow, examined the outlook and potential of integrating mobile devices in classroom curriculum. One of the biggest roadblocks or objections for this emerging trend is student accessibility to these devices. Through their research, Blackboard and Project Tomorrow reported that in United States high schools, 98% of students have some type of access to a smartphone. In addition to that, 62% of surveyed parents reported that if the school allowed mobile devices to be used in the classroom for educational purposes, they would purchase one for their child.

Despite the generally accepted anti-cell phone policies in most schools today, students are reporting 88% of them text during class and 40% use their mobile device for last-minute test cramming. With these types of statistics as examples, advocates for mobile technology learning are urging administrators and faculty that if they cannot prevent mobile devices in the classroom, embrace it and use it to their advantage.

There are many advantages, both logistically and from an educational standpoint, to embracing the movement of M-Learning. Logistically, these devices are much more manageable for a much larger population. Primarily, cost is one of the biggest advantages. These types of devices can range in price from as low as $100 to as high as $1000, based on capabilities, and educational discounts are available for schools or districts buying large quantities. As a result of the low cost, the range of student access is increased. Because cost is low, schools could afford to buy an entire classroom a set of these devices for potentially the same cost of two computers for a classroom.

The next biggest logistical advantage is the mobility of these devices. Due to their small size and wireless functionality, these devices can be used almost anywhere, rather than being confined to a classroom. Being wireless also eliminates the need for any electrical or hardwired infrastructure throughout the school, which also potentially cuts costs. Finally, one of the top influential benefits of these devices is their familiarity and ease of use. As previously mentioned, 98% of high school students have some type of access to a Smartphone, so the majority of students are familiar with these devices and understand how to operate them. For the small majority of those who are unfamiliar, the devices are not very complex and require minimal demonstration. Once operation of the device was address, the only other foreseeable obstacle would be learning the functionality of available applications for educational purposes.

From an educational standpoint, the use of mobile technology in the classroom further enforces a learning philosophy shift in the classroom which is necessary for effective technology use. This shift is from a teacher-centered approach, which controls and navigates the lesson, and therefore, the learning to a student-centered approach, where they themselves control their learning.

Abilene Christian University is one institution that accepted the movement of mobile technology in the classroom and in 2008 began equipping their students with iPods and iPhones, and now iPads. Faculty has reported that the phones have helped facilitate this shift to what they are referring to as “mobile-enhanced inquiry-based learning.” With the mobile devices as tools, this learning theory promotes teaching through student controlled experimentation and questioning. Dwayne Harapnuik, director of faculty enrichment at ACU, says “Most students don’t really have a foundation that allows them to know what questions to ask. [The phones] transfer to a model where students access the information when they need it and then make more meaningful connections based upon what they already know.”

The potential for learning and wide range of use of these mobile devices is growing, and some schools and universities are already exemplifying that. For example, ACU has implemented mobile-ready lecture podcasts, which allow students to re-consume information delivered in the classroom at their own pace, with the ability to pause and repeat confusing information. Other examples include the students in the fifth grade science class at The Lampere Schools in Madison Heights, MI who are using mobile devices to create nature journals and field guides of their school yards and back yards, and high school students in Consolidated High School District 230 in Orland Park, IL, who are using mobile devices with attachable sensors to monitor pH levels, temperature, dissolved oxygen, heat, and other qualities of a pond, which can be downloaded and graphed immediately for visualization and understanding.

I predict these few, simple examples are just a preview of how the acceptance and implementation of mobile devices in the classroom will transform student learning. Mobile technology has the potential to turn a basic, mundane, non-engaging lesson into a memorable and meaningful learning experience, and that is why it can be classified as an emerging technological trend in education.

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